

STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING **ERROR REPORT**

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Application Serial Number: 10/580,458
Source: 1FwP
Date Processed by STIC: 6/7/06

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

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FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

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<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

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Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

- 1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>), EFS Submission User Manual - ePAVE)**
- 2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450**
- 3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05): U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314**

Revised 01/10/06



IFWP

RAW SEQUENCE LISTING DATE: 06/07/2006
PATENT APPLICATION: US/10/580,458 TIME: 10:51:52

Input Set : A:\065691-0445sequencetext.txt
Output Set: N:\CRF4\06072006\J580458.raw

3 <110> APPLICANT: Assistance Publique - Hopitaux de Paris (AH-HP)
4 Institut National de la Sante et de la Recherche Medicale
5 (INSERM)
6 Institut Gustave Roussy (IGR)
7 Universite de Versailles - Saint-Quentin-en-Yvelines
8 Universite Paris-Sud
9 VAINCHENKER, William
10 UGO, Valerie
11 JAMES, Chloe
12 LE COUEDIC, Jean-Pierre
13 CASADEVALL, Nicole
15 <120> TITLE OF INVENTION: Identification of a JAK2 mutation involved in Vaquez
16 Polyglobulia
18 <130> FILE REFERENCE: D 22707
C--> 20 <140> CURRENT APPLICATION NUMBER: US/10/580,458
C--> 21 <141> CURRENT FILING DATE: 2006-05-24
23 <160> NUMBER OF SEQ ID NOS: 31
25 <170> SOFTWARE: PatentIn version 3.3
27 <210> SEQ ID NO: 1
28 <211> LENGTH: 1132
29 <212> TYPE: PRT
30 <213> ORGANISM: homo sapiens
33 <220> FEATURE:
34 <223> OTHER INFORMATION: variant JAK2 V617F
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44 Lys Gln Ile Asp Pro Val Leu Gln Val Tyr Leu Tyr His Ser Leu Gly
45 35 40 45
47 Lys Ser Glu Ala Asp Tyr Leu Thr Phe Pro Ser Gly Glu Tyr Val Ala
48 50 55 60
50 Glu Glu Ile Cys Ile Ala Ala Ser Lys Ala Cys Gly Ile Thr Pro Val
51 65 70 75 80
53 Tyr His Asn Met Phe Ala Leu Met Ser Glu Thr Glu Arg Ile Trp Tyr
54 85 90 95
56 Pro Pro Asn His Val Phe His Ile Asp Glu Ser Thr Arg His Asn Val
57 100 105 110
59 Leu Tyr Arg Ile Arg Phe Tyr Phe Pro Arg Trp Tyr Cys Ser Gly Ser
60 115 120 125
62 Asn Arg Ala Tyr Arg His Gly Ile Ser Arg Gly Ala Glu Ala Pro Leu
63 130 135 140

pp 618

Does Not Comply
Corrected Diskette Needed

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Corrected Diskette Needed**

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Input Set : A:\065691-0445sequencetext.txt
Output Set: N:\CRF4\06072006\J580458.raw

65 Leu Asp Asp Phe Val Met Ser Tyr Leu Phe Ala Gln Trp Arg His Asp
66 145 150 155 160
68 Phe Val His Gly Trp Ile Lys Val Pro Val Thr His Glu Thr Gln Glu
69 165 170 175
71 Glu Cys Leu Gly Met Ala Val Leu Asp Met Met Arg Ile Ala Lys Glu
72 180 185 190
74 Asn Asp Gln Thr Pro Leu Ala Ile Tyr Asn Ser Ile Ser Tyr Lys Thr
75 195 200 205
77 Phe Leu Pro Lys Cys Ile Arg Ala Lys Ile Gln Asp Tyr His Ile Leu
78 210 215 220
80 Thr Arg Lys Arg Ile Arg Tyr Arg Phe Arg Arg Phe Ile Gln Gln Phe
81 225 230 235 240
83 Ser Gln Cys Lys Ala Thr Ala Arg Asn Leu Lys Leu Lys Tyr Leu Ile
84 245 250 255
86 Asn Leu Glu Thr Leu Gln Ser Ala Phe Tyr Thr Glu Lys Phe Glu Val
87 260 265 270
89 Lys Glu Pro Gly Ser Gly Pro Ser Gly Glu Glu Ile Phe Ala Thr Ile
90 275 280 285
92 Ile Ile Thr Gly Asn Gly Gly Ile Gln Trp Ser Arg Gly Lys His Lys
93 290 295 300
95 Glu Ser Glu Thr Leu Thr Glu Gln Asp Leu Gln Leu Tyr Cys Asp Phe
96 305 310 315 320
98 Pro Asn Ile Ile Asp Val Ser Ile Lys Gln Ala Asn Gln Glu Gly Ser
99 325 330 335
101 Asn Glu Ser Arg Val Val Thr Ile His Lys Gln Asp Gly Lys Asn Leu
102 340 345 350
104 Glu Ile Glu Leu Ser Ser Leu Arg Glu Ala Leu Ser Phe Val Ser Leu
105 355 360 365
107 Ile Asp Gly Tyr Tyr Arg Leu Thr Ala Asp Ala His His Tyr Leu Cys
108 370 375 380
110 Lys Glu Val Ala Pro Pro Ala Val Leu Glu Asn Ile Gln Ser Asn Cys
111 385 390 395 400
113 His Gly Pro Ile Ser Met Asp Phe Ala Ile Ser Lys Leu Lys Lys Ala
114 405 410 415
116 Gly Asn Gln Thr Gly Leu Tyr Val Leu Arg Cys Ser Pro Lys Asp Phe
117 420 425 430
119 Asn Lys Tyr Phe Leu Thr Phe Ala Val Glu Arg Glu Asn Val Ile Glu
120 435 440 445
122 Tyr Lys His Cys Leu Ile Thr Lys Asn Glu Asn Glu Glu Tyr Asn Leu
123 450 455 460
125 Ser Gly Thr Lys Lys Asn Phe Ser Ser Leu Lys Asp Leu Leu Asn Cys
126 465 470 475 480
128 Tyr Gln Met Glu Thr Val Arg Ser Asp Asn Ile Ile Phe Gln Phe Thr
129 485 490 495
131 Lys Cys Cys Pro Pro Lys Pro Lys Asp Lys Ser Asn Leu Leu Val Phe
132 500 505 510
134 Arg Thr Asn Gly Val Ser Asp Val Pro Thr Ser Pro Thr Leu Gln Arg
135 515 520 525
137 Pro Thr His Met Asn Gln Met Val Phe His Lys Ile Arg Asn Glu Asp

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Input Set : A:\065691-0445sequencetext.txt
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| 138 | 530 | 535 | 540 |
| 140 | Leu Ile Phe Asn Glu Ser Leu Gly Gln Gly Thr Phe Thr Lys Ile Phe | | |
| 141 | 545 | 550 | 555 |
| 143 | Lys Gly Val Arg Arg Glu Val Gly Asp Tyr Gly Gln Leu His Glu Thr | | 560 |
| 144 | 565 | 570 | 575 |
| 146 | Glu Val Leu Leu Lys Val Leu Asp Lys Ala His Arg Asn Tyr Ser Glu | | |
| 147 | 580 | 585 | 590 |
| 149 | Ser Phe Phe Glu Ala Ala Ser Met Met Ser Lys Leu Ser His Lys His | | |
| 150 | 595 | 600 | 605 |
| 152 | Leu Val Leu Asn Tyr Gly Val Cys Phe Cys Gly Asp Glu Asn Ile Leu | | |
| 153 | 610 | 615 | 620 |
| 155 | Val Gln Glu Phe Val Lys Phe Gly Ser Leu Asp Thr Tyr Leu Lys Lys | | |
| 156 | 625 | 630 | 635 |
| 158 | 640 | 645 | 650 |
| 159 | Asn Lys Asn Cys Ile Asn Ile Leu Trp Lys Leu Glu Val Ala Lys Gln | | 655 |
| 161 | 160 | Leu Ala Trp Ala Met His Phe Leu Glu Glu Asn Thr Leu Ile His Gly | |
| 162 | 660 | 665 | 670 |
| 164 | Asn Val Cys Ala Lys Asn Ile Leu Ile Arg Glu Glu Asp Arg Lys | | |
| 165 | 675 | 680 | 685 |
| 167 | Thr Gly Asn Pro Pro Phe Ile Lys Leu Ser Asp Pro Gly Ile Ser Ile | | |
| 168 | 690 | 695 | 700 |
| 170 | 171 | 705 | 710 |
| 172 | 715 | 720 | 725 |
| 173 | 730 | 735 | 740 |
| 174 | 745 | 750 | 755 |
| 176 | 760 | 765 | 770 |
| 177 | 775 | 780 | 785 |
| 179 | 790 | 795 | 800 |
| 180 | 805 | 810 | 815 |
| 182 | 820 | 825 | 830 |
| 183 | 835 | 840 | 845 |
| 185 | 850 | 855 | 860 |
| 186 | 865 | 870 | 875 |
| 188 | 885 | 890 | 895 |
| 189 | 900 | 905 | 910 |
| 191 | 915 | 920 | 925 |
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| 194 | 935 | 940 | 945 |
| 195 | 950 | 955 | 960 |
| 197 | 965 | 970 | 975 |
| 198 | 980 | 985 | 990 |
| 200 | 995 | 1000 | 1005 |
| 201 | 1010 | 1015 | 1020 |
| 203 | 1025 | 1030 | 1035 |
| 204 | 1040 | 1045 | 1050 |
| 206 | 1055 | 1060 | 1065 |
| 207 | 1070 | 1075 | 1080 |
| 209 | 1085 | 1090 | 1095 |
| 210 | 1095 | 1100 | 1105 |

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Input Set : A:\065691-0445sequencetext.txt
 Output Set: N:\CRF4\06072006\J580458.raw

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 213 930 935 940
 215 Lys Glu Arg Ile Asp His Ile Lys Leu Leu Gln Tyr Thr Ser Gln Ile
 216 945 950 955 960
 218 Cys Lys Gly Met Glu Tyr Leu Gly Thr Lys Arg Tyr Ile His Arg Asp
 219 965 970 975
 221 Leu Ala Thr Arg Asn Ile Leu Val Glu Asn Glu Asn Arg Val Lys Ile
 222 980 985 990
 224 Gly Asp Phe Gly Leu Thr Lys Val Leu Pro Gln Asp Lys Glu Tyr Tyr
 225 995 1000 1005
 227 Lys Val Lys Glu Pro Gly Glu Ser Pro Ile Phe Trp Tyr Ala Pro
 228 1010 1015 1020
 230 Glu Ser Leu Thr Glu Ser Lys Phe Ser Val Ala Ser Asp Val Trp
 231 1025 1030 1035
 233 Ser Phe Gly Val Val Leu Tyr Glu Leu Phe Thr Tyr Ile Glu Lys
 234 1040 1045 1050
 236 Ser Lys Ser Pro Pro Ala Glu Phe Met Arg Met Ile Gly Asn Asp
 237 1055 1060 1065
 239 Lys Gln Gly Gln Met Ile Val Phe His Leu Ile Glu Leu Leu Lys
 240 1070 1075 1080
 242 Asn Asn Gly Arg Leu Pro Arg Pro Asp Gly Cys Pro Asp Glu Ile
 243 1085 1090 1095
 245 Tyr Met Ile Met Thr Glu Cys Trp Asn Asn Asn Val Asn Gln Arg
 246 1100 1105 1110
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 252 1130
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 255 <211> LENGTH: 5097
 256 <212> TYPE: DNA
 257 <213> ORGANISM: homo sapiens
 260 <220> FEATURE:
 261 <223> OTHER INFORMATION: G1849T mutation in jak2 gene
 263 <400> SEQUENCE: 2
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 265 tccctcgccg ctgacaggct gggccggcgc ccggctcgct tgggtgttcg cgtcgccact 120
 266 tcggcttcgc ggccggtcgg gcccctcgcc ccgggcttgc ggcgcgcgtc ggggctgagg 180
 267 gctgctgcgg cgcaggaga ggcctggtcc tcgctgccga gggatgtgag tgggagctga 240
 268 gccccacactg gaggcccccc gagggcccaag cctggaggtc gttcagagcc gtgcccggcc 300
 269 cggggcttcg cagacattga cccgcgggtt aggagccgcc cctgcggct cgagggcgcg 360
 270 ctctggtcgc ccgatctgtg tagccggttt cagaacgagg caacaggaac aagatgtgaa 420
 271 ctgtttctct tctgcagaaa aagaggctct tcctcccttc cccgcgcacgg caaatgttct 480
 272 gaaaaagact ctgcattggaa atggcctgcc ttacgatgac agaaaatggag ggaacatcca 540
 273 cctcttctat atatcagaat ggtgatatt ctggaaatgc caattctatg aagcaaata 600
 274 atccagttct tcaggtgtat cttaaccatt cccttggaa atctgaggca gattatctga 660
 275 ccttccatc tggggagttt gttcagaag aaatctgtat tgctgcttct aaagcttgc 720
 276 gtatcacacc tgtgtatcat aatatgtttt cttaatgag taaaacagaa aggatctgg 780
 277 atccacccaa ccatgtcttc catatagatg agtcaaccag gcataatgta ctctacagaa 840

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| 292 | taagattta | cttcctcggt | tggattgc | gtggcagcaa | cagagcctat | cgccatggaa | 900 |
| 294 | tatctcgagg | tgctgaagct | cctcttctt | atgacttgt | catgtcttac | ctcttgctc | 960 |
| 296 | agtggcggca | tgattttgt | cacggatgga | taaaagtacc | tgtgactcat | gaaacacagg | 1020 |
| 298 | aagaatgtct | tgggatggca | gtgttagata | tgatgagaat | agccaaagaa | aacgatcaaa | 1080 |
| 300 | ccccactggc | catctataac | tctatcagct | acaagacatt | cttaccaaaa | tgtattcgag | 1140 |
| 302 | caaagatcca | agactatcat | attttgacaa | ggaagcgaat | aaggtagaca | tttgcagat | 1200 |
| 304 | ttattcagca | attcagccaa | tgcaaagcca | ctgcccagaaa | cttggaaactt | aagtatctt | 1260 |
| 306 | taaatctgga | aactctgcag | tctgcctt | acacagagaa | atttgaagta | aaagaacctg | 1320 |
| 308 | gaagtggcc | ttcagggtgag | gagattttt | caaccattat | aataactgga | aacgggtggaa | 1380 |
| 310 | ttcagtggc | aagagggaaa | cataaaagaaa | gtgagacact | gacagaacag | gatttacagt | 1440 |
| 312 | tatattgcg | ttttccta | attattgt | tcagtattaa | gcaagcaaac | caagagggtt | 1500 |
| 314 | caaatgaaag | ccgagggtgta | actatccata | agcaagatgg | taaaaatctg | gaaattgaac | 1560 |
| 316 | ttagctcatt | aagggaagct | ttgtctt | tgtcattaa | tgtggat | tatagattaa | 1620 |
| 318 | ctgcagatgc | acatcattac | ctctgtaa | aagtgcacc | tccagccgt | cttggaaaata | 1680 |
| 320 | tacaaagcaa | ctgtcatggc | ccaattt | tggatttgc | cattagtaaa | ctgaagaaaag | 1740 |
| 322 | caggtaatca | gactggactg | tatgtactt | gatgcagtcc | taaggactt | aataaattt | 1800 |
| 324 | ttttgactt | tgctgtcgag | cgagaaaatg | tcattgata | taaacactgt | ttgattacaa | 1860 |
| 326 | aaaatgagaa | tgaagagtac | aacctcagtg | ggacaaaagaa | gaacttcagc | agtcttaaag | 1920 |
| 328 | atctttgaa | ttgttaccag | atggaaactg | tgcgtcaga | caatataatt | ttccagttt | 1980 |
| 330 | ctaaatgctg | tcccccaa | ccaaaagata | aatcaaacc | tctagtctt | agaacgaatg | 2040 |
| 332 | gtgtttctg | tgtaccaacc | tcaccaacat | tacagaggcc | tactcatatg | aaccaaatgg | 2100 |
| 334 | tgtttcacaa | aatcagaaat | gaagattt | taattatg | aagccttgc | caaggcactt | 2160 |
| 336 | ttacaaagat | ttttaaaggc | gtacgaagag | aagttaggaa | ctacggtaa | ctgcataaaa | 2220 |
| 338 | cagaagttct | ttttaaagg | ctggataa | cacacagaaa | ctattcagag | tctttctt | 2280 |
| 340 | aagcagcaag | tatgtgagc | aagttt | acaagcattt | ggttttaat | tatggagtat | 2340 |
| 342 | gtttctgtgg | agacgagaat | attctgtt | aggagttt | aaaatttgg | tcactagata | 2400 |
| 344 | catatctgaa | aaagaataaa | aattgtataa | atatattatg | gaaacttgg | gttgc当地 | 2460 |
| 346 | agttggcatg | ggccatgcat | tttctaga | aaaacacc | tattcatgg | aatgtatgt | 2520 |
| 348 | ccaaaaat | tctgtt | agagaaga | acaggaagac | aggaaatcc | ccttcata | 2580 |
| 350 | aacttagtga | tcctggcatt | agtattac | ttttgc | ggacattt | caggagagaa | 2640 |
| 352 | taccatgggt | accac | tgcattgaaa | atcctaaaa | tttaaattt | gcaacagaca | 2700 |
| 354 | aatggagtt | tgttaccact | ttgtggaaa | tctgcagt | aggagataaa | cctcta | 2760 |
| 356 | ctctggattc | tcaaagaa | ctacaattt | atgaagat | gcatcag | cctgcacca | 2820 |
| 358 | agtggcaga | attagcaac | tttataa | attgtatg | ttatgaa | gattcaggc | 2880 |
| 360 | cttctt | agccatcata | cgagatctt | acagttt | tactccag | tatgaa | 2940 |
| 362 | taacagaaaa | tgacatgtt | ccaaatatg | ggatagg | gc | cctgggtt | 3000 |
| 364 | ttgaagaccg | ggatc | taca | cagtt | gaaattt | cagcaactt | 3060 |
| 366 | gcaagggtaa | ttttggagt | gtggagat | gcccgtat | ccctctac | gacaacact | 3120 |
| 368 | gggagggtgt | cgctgt | aaaa | agcttcagc | atagact | agaccc | 3180 |
| 370 | aaaggaaat | tgaaatc | aaatcc | ac | agcatg | aa | 3240 |
| 372 | tgtgctac | tgctgtcg | cgtaatct | aaattat | ggaattt | ccat | 3300 |
| 374 | gttacgaga | ctatctt | aaacataa | aacggat | ta | cata | 3360 |
| 376 | acacatctca | gatatgc | ggatgg | atctt | ggat | atccac | 3420 |
| 378 | atctggcaac | gagaatata | ttgg | ggaga | ac | ggat | 3480 |
| 380 | gttac | ccat | caagaca | aata | actata | ggat | 3540 |
| 382 | gtccatatt | ctgg | atgt | ccaga | atc | ggat | 3600 |
| 384 | atgttggag | ctt | ggat | gtt | ctgt | atc | 3660 |
| 386 | gtccacc | ggaattt | atg | cgtat | gat | atc | 3720 |
| 388 | tccattt | gat | aga | ataat | g | aa | 3780 |

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 06/07/2006
PATENT APPLICATION: US/10/580,458 TIME: 10:51:53

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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:13; N Pos. 20,21

Seq#:14; N Pos. 20,21

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/580,458

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Input Set : A:\065691-0445sequencetext.txt
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L:20 M:270 C: Current Application Number differs, Replaced Current Application Number
L:21 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:593 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
L:611 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0

10/580,458 8

<210> 13
<211> 21
<212> RNA
<213> homo sapiens

<220>
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<222> (20) (21)
<223> n is T

<220>
<223> sense siRNA

<400> 13
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<210> 14
<211> 21
<212> RNA
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<220>
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<223> n is T
antisense

<220>
<223> antisense siRNA

<400> 14
uccacagaaa cauacuccan n

It's not allowed in an RNA sequence, even if "n" represents them. For a combined DNA/RNA sequence, use <212> DNA and explain in <220>-<223> section